# Cancer Research Center Hotline

## Highlights of Recent Cancer Incidence Data in Hawaii

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Effective cancer control activities including health care services, public health education and policy development, as well as research activities are dependent on access to accurate and relevant cancer incidence data. The Hawaii Tumor Registry of the Cancer Research Center recently calculated cancer incidence data for the State using population information from the 2000 US Census and the Hawaii Department of Health. The following update highlights some of the findings and provides an overview of ethnic-specific rates and cancer trends. All rates are age-adjusted to the US 2000 standard population. A more comprehensive presentation of the data will be published in the coming year.

### Overall trends

More than 6,000 Hawaii residents are diagnosed with invasive cancer each year. During the past decade, men have experienced a general decline in cancer incidence, from a high of 516 per 100,000 men per year in 1990-1994 to 472 per 100,000 per year in 1995-2000. Among women, cancers rates increased slightly from 367 per 100,000 per year for 1990-1994 to 379 per 100,000 per year for 1995-2000.

Much of the overall decrease in cancer incidence among men in the 1990's can be attributed to changes in prostate cancer screening patterns. With the advent of widespread prostate specific antigen (PSA) testing during the 1980's, Hawaii, like the rest of the country, experienced enormous increases in the diagnosis of early (localized) prostatic lesions. Prostate cancer rates subsequently jumped from 97 per 100,000 annually in 1985-1989 to 156 per 100,000 annually in 1990-1994, before tapering off to a rate of 127 per 100,000 per year by the late 1990's. The overall decline in prostate cancer rates over the past decade may be due to screening saturation in the population, or a decrease in the use of PSA screening.

In addition to the decline in prostate cancer, decreases in the rates of cancers of the stomach, colon, pancreas, lung, bladder, and non-Hodgkin's lymphoma have also been experienced among men in recent years. The decreases in lung and bladder cancer incidence are likely to be related to the declining prevalence of cigarette smoking among men. By contrast, increases in the incidence of liver cancer and melanoma have been observed recently. Melanoma increased substantially among men from an average annual incidence of 14 cases per 100,000 in 1990-1994 to 21 cases per 100,000 in 1995-2000. Little change was observed in the rates of cancers of the rectum, kidney, and thyroid, or in Hodgkin's lymphoma and leukemia.

Breast cancer is the most common malignancy among Hawaii's women. The small increase in cancer rates among women in the 1990's resulted mainly from a change in breast cancer rates from an average annual rate of 116 per 100,000 women in 1990-1994 to 128 per 100,000 in 1995-2000. Most of the increase in breast cancer was observed at an early stage (localized), indicating that some of the increase is an artifact of widespread screening. In addition, non-invasive (*in situ*) breast cancer rates also increased during the 1990's.

Recent decreases in cancer rates among women were observed for cancers of the stomach, colon, and bladder. Increases in rates were observed for cancer of the rectum, corpus uteri (endometrium), kidney, thyroid, and in melanoma. The overall increase in melanoma incidence among women was not as dramatic as that in men (from an average annual rate of 8 cases to 10 cases per 100,000 women from the period 1990-1994 to 1995-2000). Little change was found in the incidence of the cancers of the liver, pancreas, lung, cervix, and ovary, or of Hodgkin's and non-Hodgkin's lymphoma, and leukemia among women.

The ethnic heterogeneity in cancer incidence in Hawaii has served as the basis for much of our research at the Cancer Research Center and has provided numerous clues to cancer etiology. Ethnic differences in the stage at cancer diagnosis provide the basis of targeted screening activities and other cancer control efforts in the State. The most recent cancer rates among men show the highest incidence in Caucasians (589 per 100,000) followed by Filipinos (474 per 100,000), Hawaiians/part-Hawaiians (437 per 100,000), Japanese (418 per 100,000), and Chinese (416 per 100,000).

Among women, cancer incidence is highest in Hawaiiians/part-Hawaiians (461 per 100,000) and Caucasians (452 per 100,000), followed by Japanese (346 per 100,000), Chinese (327 per 100,000), and Filipinos (316 per 100,000).

### Ethnic-specific trends

The following highlight specific ethnic differences in cancer rates by site:

*Stomach cancer.* Japanese men continued to have the highest rates of stomach cancer. Although the overall incidence of stomach cancer decreased in males (including Japanese) and females from 1990 to 2000, an increase was observed for Filipino men.

*Colon and rectum cancers.* Japanese and Caucasians have the highest rates of colon cancer, among both men and women. There was an overall decrease in the incidence of colon cancer from 1990 to 2000 with the largest decrease observed among Caucasian men and women. By contrast, a substantial increase in colon cancer was seen for Filipino men, and a modest increase was observed in Hawaiian/part-Hawaiian men and Japanese and Chinese women. Japanese men have consistently had the highest rates of rectal cancer since 1975, ranging from 15% to 25% higher than overall male cancer rates for the rectum.

*Lung cancer.* There was a decrease in lung cancer incidence for men in most ethnic groups. However, Japanese men exhibited no change and Filipino men, a substantial increase, representing a doubling of the incidence rates since the 1970's. Hawaiian women have the highest rates of lung cancer among women and have experienced a steady increase in lung cancer rates since the 1970's. With the

exception of a small increase among Japanese women, all other female ethnic groups have experienced a decrease in lung cancer rates in recent years.

*Prostate cancer.* Prostate cancer rates declined in the late 1990's among all major ethnic groups except Hawaiians. Hawaiian men have the lowest rates of prostate cancer and failed to show the screening-related phenomenal rise in rates that the other groups did in the early 1990's.

*Breast cancer.* Hawaiian women have the highest breast cancer incidence rates, followed by Caucasians. Asian women in Hawaii have exhibited large increases in the incidence of breast cancer during the last decade, and now have rates approaching those of Caucasians and Hawaiians. This increase has occurred at early stages, indicating the influence of screening. The overall rate for Japanese women is about 15% lower than Caucasians; that for Chinese women, 28% lower, and that for Filipino women, 40% lower.

*Melanoma.* Melanoma occurs predominantly in Caucasians, whose rates are more than 10 times greater than other ethnic groups. The overall increase observed from 1990 to 2000 is the largest single increase observed in any ten-year period since the 1970's.

*Thyroid cancer.* Filipino women continue to have the highest incidence of thyroid cancer compared to both men and women of all ethnic groups, with rates twice that of other women. This pattern has consistently been observed over the past 20 years.

Trends in cancer incidence and ethnic differences in cancer rates reflect the multifactorial etiology of this disease, as well as differences in the utilization of health care services. A comprehensive presentation of cancer incidence data for Hawaii, including trends for all major cancer sites during the past 25 years, will be featured in an upcoming joint publication of the American Cancer Society, the Department of Health, and the Cancer Research Center of Hawaii. This publication will be oriented to agencies and organizations involved in various aspects of cancer control planning and will be available in the Spring of 2003.

For more information, please visit the Cancer Research Center website at www.crch.org .